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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,432	09/28/2006	Akihiro Toshima	20708/0205525-US0	8748
7278	7590	12/18/2009	EXAMINER	
DARBY & DARBY P.C. P.O. BOX 770 Church Street Station New York, NY 10008-0770			DIAZ, THOMAS C	
			ART UNIT	PAPER NUMBER
			3656	
			MAIL DATE	DELIVERY MODE
			12/18/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/599,432

**Applicant(s)**

TOSHIMA ET AL.

**Examiner**

THOMAS DIAZ

**Art Unit**

3656

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3, 7, 9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/13/2009 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 3, 7, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDuff (USP 3908479) in view of Lippert et al. (USP 1502729).**

Regarding claims 1, MacDuff discloses a similar apparatus comprising a steering drive shaft (fig.1, 58; it is capable of moving in an axial direction) [capable of moving in an axial direction in response to a steering operation]; a housing (fig.1, 16) accommodating the steering drive shaft and having a tube part (fig.1, 16; is in the form

of a tube part) extending in a long axis direction of the steering drive shaft; and a bracket (fig.1, 20) formed as a single molded piece (see figures) and having a fitting hole (fig.1, the hole through which the tube part and steering shaft penetrate axially.) into which said tube part is fitted in a co-axial direction of the tube part and which said tube part penetrates and [configured to attach said housing to a car body] (fig.1, attaches to car body or frame at 14, 26), and a bearing member fitted inside the tube part, and supporting the steering drive shaft (fig.1, 60, 70, are bearing elements since they support the shaft that moves within them) and wherein said bracket has a recess (fig.1, recess near where 20 is labeled) in said fitting hole, the recess being a circular groove (the recess is a circumferential or circular groove). MacDuff discloses an annular or circumferential protrusion which is bent into the recess.

MacDuff fails to explicitly disclose that said tube part has a plurality of escape preventing protrusions bent into said recess and extending in a radial direction of the tube part, for preventing said bracket from escaping.

Lippert et al. teaches the concept of fastening a tubular member to a housing or bracket by means of forming a plurality of protrusions in the tubular member for the purpose effectively preventing the removal of the tubular member from the housing or bracket. Additionally, Lippert et al. teaches that any number of die members can be used to make the protrusions (page 2 of the spec, lines 82-85). In other words any number of protrusions can be used which would provide the predictable result of variability of the strength of the connection.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the escape preventing protrusion disclosed by MacDuff, to be formed by a plurality of escape preventing protrusions, as taught by Lippert et al. for the purpose preventing the removal of the tubular member from the housing or bracket in an effective and cheap manner. Additionally, Lippert et al. teaches that any number of die members can be used to make the protrusions (page 2 of the spec, lines 82-85). In other words any number of protrusions can be used which would provide the predictable result of variability of the strength of the connection.

Regarding claim 3, MacDuff discloses said tube part is metal (see fig.1, based on the cross-hatching, the tube part is metal).

Regarding claim 7, MacDuff discloses a similar device comprising a steering drive shaft (fig.1, 58; it is capable of moving in an axial direction) [capable of moving in an axial direction in response to a steering operation]; a housing (fig.1, 16) accommodating the steering drive shaft and having a tube part (fig.1, 16; is in the form of a tube part) extending in a long axis direction of the steering drive shaft; and a bracket (fig.1, 20) formed as a single molded piece (see figures) and having a fitting hole (fig.1, the hole through which the tube part and steering shaft penetrate axially.) into which said tube part is fitted in a co-axial direction of the tube part, the bracket attaching said housing to a car body (fig.1, the bracket attaches to the car body or frame at 14), and wherein, said bracket has a recess (fig.1, the recess near the label at 20 where the protrusion is bent in.) in said fitting hole, the recess being a circular groove

(the recess is a circumferential or annular groove as evidenced by the figures). MacDuff discloses an annular or circumferential protrusion which is bent into the recess.

MacDuff fails to explicitly disclose that said tube part has a plurality of escape preventing protrusions bent into said recess and extending in a radial direction of the tube part, for preventing said bracket from escaping.

Lippert et al. teaches the concept of fastening a tubular member to a housing or bracket by means of forming a plurality of protrusions in the tubular member for the purpose effectively preventing the removal of the tubular member from the housing or bracket. Additionally, Lippert et al. teaches that any number of die members can be used to make the protrusions (page 2 of the spec, lines 82-85). In other words any number of protrusions can be used which would provide the predictable result of variability of the strength of the connection.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the escape preventing protrusion disclosed by MacDuff, to be formed by a plurality of escape preventing protrusions, as taught by Lippert et al. for the purpose preventing the removal of the tubular member from the housing or bracket in an effective and cheap manner. Additionally, Lippert et al. teaches that any number of die members can be used to make the protrusions (page 2 of the spec, lines 82-85). In other words any number of protrusions can be used which would provide the predictable result of variability of the strength of the connection.

Regarding claim 9, MacDuff discloses the recess is pre-formed in the bracket prior to the bending of the at least one escape preventing protrusion (fig.1, the recess is entirely part of the structure of the bracket and is therefore preformed).

Regarding claim 10, MacDuff discloses the at least one escape preventing protrusion bent into said recess permanently prevents the bracket from escaping (fig.1, the bracket can not escape due to the circumferential protrusions as is readily evident from the figure).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS DIAZ whose telephone number is (571)270-5461. The examiner can normally be reached on Monday-Friday 8:30am to 5:00pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Diaz/  
Examiner, Art Unit 3656

/Richard WL Ridley/  
Supervisory Patent Examiner, Art Unit 3656